

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to consistent with 37 C.F.R. §1.112, and in light of the remarks which follow, are respectfully requested.

Applicant affirms the election of species made on January 27, 2003.

Pentafluoroethane was selected as constituent (a) and a mixture of pentafluoroethane and 1,1,1,2-tetrafluoroethane as constituent (b).

Claim 1 has been amended to be specific to the elected species. The minimum of 35 wt. % R125 is supported by original claims 13 and 16. The minimum of 64 wt. % of component (b) is determined by subtracting the minimum of 35% of (a) and 1% of (c) from 100%. Claims 4, 9, 15 and 16 have been canceled and claims 13 and 17 amended. Claims 1-3, 5-8, 10-14, 17-24, 26 and 27 remain pending in this application with claims 5-8 and 19-22 being withdrawn from consideration.

Figure 3 was objectionable for the reason given in paragraph (3) of the Office Action. In response thereto, a corrected drawing is submitted herewith. In view thereof, withdrawal of this objection is requested.

The specification was objected to for reasons given in paragraph (4) of the Office Action. In response thereto, a paragraph has been inserted providing a brief description of Figures 1, 2 and 3. Accordingly, the objection to the specification should be withdrawn.

Claims 1-4, 11-18 and 23-27 were rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-9 of U.S. Patent No. 6,428,720. The Examiner's position is set forth in paragraph (6) of the Office Action.

Applicant disagrees with this rejection and maintains that the respective claims are drawn to patentably distinct species. Mere overlapping in scope of the claims does not necessarily mean that the respective inventions are unpatentable over one another. However, Applicant will consider filing a Terminal Disclaimer upon an indication of allowable subject matter.

Claims 1-4, 10-18, 23, 24, 26 and 27 were rejected under 35 U.S.C. §102(b) as anticipated by WO 96/03473 A1 for the reasons advanced in paragraph (9) of the Office Action. Reconsideration of this rejection is respectfully requested in view of the above amendments and for at least the following arguments.

The ranges disclosed on page 4 of the WO '473 document are general ranges and do not explicitly teach the ranges of the currently amended claims. With reference to Table 1 on page 9 of the document, it may be seen that the amounts of R125 are significantly below the minimum of 35 wt. % in (a) plus an amount in mixture (b). The compositions in Table 5 on page 19 contain large amounts of R143(a), i.e. at least 48.9 wt. % in Example 9. In contrast, the compositions defined in amended claim 1 must contain at least 64% of R125 + R134(a) and at least 1% of component (c) and thus exclude the compositions in Table 5 of WO '473.

Accordingly, based on the above amendments and remarks, the §102(b) rejection should be withdrawn. Such action is respectfully requested.

Claims 1-4, 10-18, 23, 24, 26 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over WO 96/03473 for the reasons given in paragraph (11) of the Office Action. Reconsideration and withdrawal of this rejection is requested for at least the reasons which follow.

The art of refrigerants is a very crowded one, and considerable effort has been expended to design new compositions, particularly to avoid ozone depletion. It is not a trivial matter to select a composition that meets all of the requirements, and one cannot simply take a prior art composition and vary its components at random with any expectation of success. There are many factors to consider in addition to the boiling point and latent heat and other thermal properties of the composition. For example, one must consider environmental effects, the effects on seals and lubricants in the refrigeration apparatus, the tendency of the composition to fractionate on changes of pressure and temperature, and flammability of the compositions.

The cited art fails to disclose or suggest refrigerant compositions falling within the ranges of the present claims. In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must

be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The motivation to modify the relied on prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. In re Napier, 55 F.2d 610,613; 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995). Obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the modification. In re Geiger, 815 F.2d 686,688; U.S.P.Q.2d 1276,1278 (Fed. Cir. 1987).

It would not have been obvious from the disclosure of WO '473 to vary the proportions and components generally described therein as well as the specific formulations disclosed and arrive at the presently claimed invention. Specifically, the WO document teaches that large amounts of R125 should be used only when large amounts of R143a are present. There is no suggestion in the document which would motivate those of ordinary skill to modify the specific formulations disclosed therein and prepare compositions having the components and amounts set forth in the present claims. Nor would there be a reasonable expectation that the resulting formulations would successfully perform their expected functions.

For at least the various reasons discussed above, the present claims, as amended, are unobvious over the relied upon reference. Accordingly, the §103(a) rejection should be withdrawn.

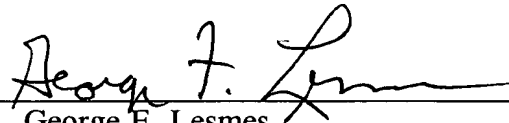
From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at his earliest convenience.

Respectfully submitted,

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